

**Remarks*****Status***

Claims 91-101 and 107-113 were pending in the application and the Examiner rejected all of the pending claims for the reasons defined in the Final Office Action and summarized below. The rejection of the claims is respectfully traversed. Claims 91, 98, 107 and 110 are the independent claims.

***Discussion***

The Examiner rejected claims 91-101 and 107-113 under 35 U.S.C. §103(a) as being unpatentable over *Alexander et al.* (U.S.P. 6,177,931) in view of *Sitnik* (U.S.P. 6,160,570). The Applicant respectfully traverses the rejections and submits that all of the pending claims are patentable over the cited references.

Initially the Applicant would like to address the Examiners response to arguments on pages 6 and 7 of the Office Action. The Examiner contends that the "Applicants' arguments ... are all focused in one main issue of 'heuristic rules' related to gender and income level of the users, *wherein the system can collect those information for providing services correspondingly in interactive program guides (emphasis added)*". The Applicant points out that while the arguments previously presented may have primarily focused on claimed features related to retrieval and application of heuristic rules relating to gender and income level that the Applicant in no sense is limiting his arguments regarding patentability of the claims thereto. Rather, as the references cited had glaring weaknesses regarding disclosure or teaching of these claimed features, of which the Examiner has agreed that the primary reference (*Alexander et al.*) does not disclose or teach, the Applicant focused their arguments thereon.

**Examiners assertion regarding Applicants claims and/or arguments**

The Applicant points out that the Examiners contention regarding Applicants' arguments includes discussion regarding collecting those information for providing IPG services (italicized portion). Initially, Applicant points out that they are unsure of what the Examiner is referring to

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when she says "those information". The Applicant assumes the Examiner is either referring to heuristic rules or gender or income data. Whatever the Examiner intended, the Applicant points out that neither the claimed features nor the Applicants arguments discuss collecting information (e.g., "those information"). Rather, in a nutshell the claimed features include monitoring interactions, retrieving heuristic rules associated with the interactions, and applying the heuristic rules to the interactions to generate a subscriber profile.

Furthermore, neither the claimed features nor the Applicants arguments discuss anything related to providing IPG services as the Examiner appears to suggest. Applicant submits that the Examiner is reading features (e.g., providing IPG services) into the claims to potentially aid in her rejection of the claims. That is, the Examiner argues that "This technique is already disclosed within the related arts so many times and repeatedly used within the interactive program guide EPG or IPG system for years". The Applicant takes this passage to mean that the Examiner is taking Official Notice that this is done. The Applicant respectfully traverses this assertion or any Official Notice directed to the same. The Applicant respectfully requests that the Examiner provide an appropriate reference or affidavit, or withdraw the rejection.

#### **Examiners substantive arguments**

The Examiner asserts that the retrieving heuristic rules feature is taught by *Alexander et al.* by a program profile that learns or performs sophisticated analysis (col. 29, line 55 – col. 30, line 44), compares an individuals viewing habits to profiles of others (col. 30, lines 38–44), wherein the profile of others includes non-television viewing characteristics, such as, sense of humor, chronological age, activity age, kids, and pets (col. 30, lines 17-37). The Examiner doesn't address the application of the heuristic rules feature of the claims. The Applicant assumes that the same reasoning applies to the application of the heuristic rules as to the retrieval addressed above.

The Applicant submits that there is no clear disclosure or suggestion in *Alexander et al.* of heuristic rules as suggested by the Examiner. While *Alexander et al.* disclose that with sufficient data the EPG could characterize different parameters about a viewer (e.g., chronological age, activity age, kids) there is no indication how these parameters are determined. That is, there is nothing that suggests that these parameters were determined by retrieving

heuristic rules associated with the interactions that associate the interactions to demographics or applying the heuristic rules to the interactions to generate a demographic profile. Rather, it is possible that the demographics determined in *Alexander et al.* are generated based on other means (e.g., triggers, single transactions, complex formulas) that are not heuristic rules.

Moreover, it appears to the Applicant that the Examiner has attempted to take different pieces of the teachings of *Alexander et al.* and to combine them in a fashion (e.g., out of context) to possibly read on a claimed features and thus support the Examiners proposed rejection. For example, the Applicant appears to infer that the "learning" or "sophisticated analysis" described at col. 30, lines 1-16, for generating viewer characteristics (e.g., chronological age, activity age, kids) is equivalent to heuristic rules. The Examiner then asserts that the heuristic rules associate interactions to non-interactions because viewing habits are compared to profiles of others, as described at col. 30, lines 37-44 and the profiles of others include viewing characteristics (e.g., chronological age, activity age, kids) as described at col. 30, lines 17-37. The Applicant points out the comparison disclosed in *Alexander et al.* is a comparison of the viewer profile to profiles of other viewers, not the habit of a viewer to profiles of others as asserted by the Examiner. Accordingly, the viewer profiles as well as the profiles of other viewers include viewing characteristics (e.g., chronological age, activity age, kids). Accordingly, this comparison has nothing to do with heuristic rules or demographics as asserted by the Examiner. Rather, this comparison of profiles is to determine possible interests (e.g., movie, theme) of the subscriber. It appears that the Examiner is equating a heuristic rule to both a process (learning and/or sophisticated analysis) and a result (viewer profile) in order to support her rejection.

Even assuming arguendo that the Examiner could somehow construe *Alexander et al.* as disclosing or suggesting heuristic rules (without acknowledging or conceding such), the Examiner acknowledges that *Alexander et al.* do not disclose heuristic rules related to income level or gender. The Examiner relies on *Sitnik* for disclosing the feature that even the Examiner acknowledges is delinquent from the teachings of *Alexander et al.* The Examiner contends that *Sitnik* teaches collecting viewer profiles further including the users gender and income (col. 1, line 58 to col. 2, line 4; col. 7, lines 40-57, and col. 8, line 33 – col. 9, line 4). The Applicant submits that even if the Examiners assertion with regard to what *Sitnik* teaches is correct (without acknowledging or conceding such) and that there was sufficient motivation to combined the

references (without acknowledging or conceding such), that the claimed embodiments (heuristic rules equating interactions to gender and income) would not result. That is, the Applicant submits that *Sitnik* does not disclose the features that are delinquent from the teachings of *Alexander et al.* (e.g., heuristic rules, heuristic rules related to income level or gender).

In relation to *Sitnik* the Examiner states "in the same environment of providing program services to user's profile or 'heuristic rules' as explained, *Sitnik* teaches include collecting viewer profiles further including the user's sex or gender, the yearly income level". It would appear that the Examiner is equating a heuristic rule and a user profile to be the same thing. The Applicant points out that as recited in the claims, heuristic rules associated with at least some subset of the subscriber interactions are retrieved and applied to the at least some subset of the subscriber interactions to generate the subscriber profile. That is, the subscriber profile is the byproduct of the application of heuristic to interactions and is not itself a heuristic rule as it would appear the Examiner was alleging.

Even if the Examiner is not erroneously equating a profile with a heuristic rule, the Examiner does not rely on *Sitnik* for retrieving or applying heuristic rules to generate a profile but rather relies on *Sitnik* for "collecting viewer profiles further including the user's sex or gender, the yearly income level". Collecting profiles that include gender and income is not the claimed invention. Rather, as previously mentioned the claimed invention covers the retrieval of heuristic rules associated with at least some subset of the subscriber interactions are the application of the heuristic rules to the at least some subset of the subscriber interactions to generate the subscriber profile.

Moreover, the Applicant submits that *Sitnik* does not disclose, teach or suggest heuristic rules, or applying the rules to generate a subscriber profile. *Sitnik* discloses a user profile that includes demographic information, but it clearly does not disclose that heuristic rules were used to generate the demographic information contained in the profile. In fact, *Sitnik* discloses that the user profile may be determined using an on-screen questionnaire (col. 7, line 65 – col. 8, line 3). There is clearly no disclosure or suggestion that demographic data in the user profile would be generated by application of heuristic rules.

For at least the reasons addressed above, the Applicant submits that the Examiner has clearly not supported a prima facie case of obviousness as none of the cited references, whether taken alone or in combination, teach, disclose or suggest the claimed embodiments (e.g., heuristic rules, heuristic rules related to income level or gender, or applying the heuristic rules to generate a subscriber profile).

The Examiner further argues that on page 9 of the previous Amendment, that the Applicant argues features that were not recited in the claims (e.g., logical, conditional probabilities). The Applicant respectfully disagrees. The Applicant put a discussion of heuristic rules in the Amendment to help show the Examiner that heuristic rules were rules that could be applied to interactions to generate a subscriber profile. The retrieval and application of heuristic rules is clearly claimed, and the arguments in this and past amendments simply focus on the claimed embodiments. Moreover, it should be noted that claim 107 in fact does recite heuristic rules that associate subscriber interactions with probabilities of the subscriber having certain demographic traits. However, the discussion of heuristic rules was simply to help demonstrate that the heuristic rules and subscriber profile were not the same (an argument that the Examiner appears to have made in this office action as well as previous Office Actions). That is, the Applicant wanted to point out that the heuristic rules are a means to get to and end (subscriber profile) and not an end in and of themselves.

Claim 91 is directed to a method for generating a subscriber profile for a subscriber of television services. The method includes monitoring subscriber interactions with a television. Heuristic rules associated with at least some subset of the subscriber interactions are retrieved. The heuristic rules predict demographic characteristics about the subscriber including at least some subset of gender and income level. The heuristic rules are applied to the at least some subset of the subscriber interactions to generate the subscriber profile.

The applicant submits that neither *Alexander et al.* nor *Simik* disclose, teach or suggest the method of claim 91. For example, neither reference disclose, teach or suggest retrieving heuristic rules associated with subscriber interactions that predict demographic characteristics

about the subscriber (e.g., gender, income level) or applying the heuristic rules to the subscriber interactions to generate a subscriber profile.

As disclosed above, the Examiner acknowledges that *Alexander et al.* do not teach heuristic rules that predict demographic characteristics about the subscriber including at least some subset of gender and income level, but relies on *Sitnik* for teaching this element (col. 1/line 58 to col. 2/line 4 for an example of appropriate images and programs to children under the age of thirteen; Fig. 3, and col. 7/line 40-57 & col. 8/line 53 to col. 9/line 4)". As discussed above, *Sitnik* simply teaches collecting and using viewer user data (e.g., sex, gender, income) and does not disclose or suggest retrieving heuristic rules, let alone heuristic rules predict demographic characteristics about the subscriber including at least some subset of gender and income level, or applying the heuristic rules to subscriber interactions to generate a subscriber profile.

As *Sitnik* clearly does not disclose the deficiencies in *Alexander et al.* that the Examiner has acknowledged, the combination does not result in the embodiment recited in claim 91. As such, the Applicant submits that claim 91 is clearly patentable over the cited references for at least the above noted reasons. Claims 92-97 depend from claim 91 are therefore submitted to be patentable over the cited references for at least the reasons discussed above with respect to claim 91 and for the further features recited therein. The Applicant respectfully submits that the rejections of claims 91-97 have been overcome and that the rejection should according be withdrawn.

Claim 98 is directed to a method for generating a subscriber profile. The method includes monitoring subscriber interactions with a television; processing the subscriber interactions to generate interaction traits; retrieving heuristic rules associated with the interaction traits, wherein the heuristic rules associate the interaction traits to demographic traits, the interaction traits to demographic traits associations including at least some subset of program to gender, channel change speed to gender, channel change speed to income level, program genre to age, program genre to gender, program genre to income level, and program genre to family size; and generating the subscriber profile by applying the heuristic rules to the interaction traits.

The applicant submits that neither *Alexander et al.* nor *Sitnik* disclose, teach or suggest the method of claim 98. For example, neither *Alexander et al.* nor *Sitnik* disclose, teach or

suggest retrieving heuristic rules associating interaction traits to demographic traits (e.g., channel change speed to gender, channel change speed to income level) about the subscriber or applying the heuristic rules to the subscriber interactions to generate a subscriber profile. The Applicant submits that claim 98 is patentable over the cited references for at least reasons similar to those described above with respect to claims 91 and 95. Claims 99-101 depend from claim 98 are therefore submitted to be patentable over the cited references for at least the reasons discussed above with respect to claim 98 and for the further features recited therein.

Claim 107 is directed to a method for generating a demographic profile of a subscriber based on subscriber interactions with a television. The method includes monitoring subscriber interactions with a television; retrieving heuristic rules associated with the subscriber interaction, wherein the heuristic rules associate the subscriber interactions with probabilities of the subscriber having certain demographic traits; applying the heuristic rules to the subscriber interactions to generate probabilistic demographic traits based on the subscriber interactions; and generating a demographic profile of the subscriber by aggregating all the probabilistic demographic traits for various subscriber interactions.

The applicant submits that neither *Alexander et al.* nor *Sitnik* disclose, teach or suggest the method of claim 107. For example, neither *Alexander et al.* nor *Sitnik* disclose, teach or suggest heuristic rules that associate subscriber interactions with probabilities of the subscriber having certain demographic traits; applying the heuristic rules to the subscriber interactions to generate probabilistic demographic traits based on the subscriber interactions; or generating a demographic profile of the subscriber by aggregating all the probabilistic demographic traits for various subscriber interactions.

The Examiner simply refers to other rejections and has provided no evidence that either of the references disclose heuristic rules associating interactions with probabilistic demographic traits; generating probabilistic demographic traits therefrom, or generating a demographic profile by aggregating all the probabilistic demographic traits. The Applicant submits that there is no disclosure, teaching or suggestion in the references of these features. In fact, neither reference even discloses a subscriber profile having probabilistic demographic traits.

Accordingly, the Applicant submits that claim 107 is clearly patentable over the cited references for at least the above noted reasons. Claims 108 and 109 depend from claim 107 are therefore submitted to be patentable over the cited references for at least the reasons discussed above with respect to claim 107 and for the further features recited therein.

Claim 110 is directed to a method for generating a demographic profile of a subscriber based on subscriber interactions with a television. The method includes monitoring subscriber television viewing interactions; processing the subscriber television viewing interactions to generate subscriber television viewing characteristics; retrieving heuristic rules associated with at least some subset of the subscriber television viewing characteristics, wherein the heuristic rules associate television viewing characteristics with probabilistic demographic characteristics; and applying the heuristic rules to the at least some subset of the subscriber television viewing characteristics to generate a probabilistic demographic profile.

The applicant submits that neither *Alexander et al.* nor *Sitnik* disclose, teach or suggest the method of claim 110. For example, neither *Alexander et al.* nor *Sitnik* disclose, teach or suggest heuristic rules that associate subscriber interactions with probabilistic demographic characteristics; applying the heuristic rules to the subscriber interactions to generate probabilistic demographic profile. For reasons at least similar to those advanced above with respect to claim 107, the Applicant submits that claim 110 is clearly patentable over the cited references for at least the above noted reasons. Claims 111-113 depend from claim 110 are therefore submitted to be patentable over the cited references for at least the reasons discussed above with respect to claim 110 and for the further features recited therein.



**Conclusion**

For the foregoing reasons, Applicant respectfully submits that claims 91-101, 107-113 are in condition for allowance. Accordingly, early allowance of claims 91-101, 107-113 is earnestly solicited.

If the Examiner believes that a conference would be of value in expediting the prosecution of this Application, the Examiner is hereby invited to contact the undersigned attorney to set up such a conference.

Respectfully submitted,



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Craig Hallacher  
Reg. No. 54,896

6206 Kellers Church Road  
Pipersville, PA 18947  
Phone: (215) 766-2100  
Fax: (215) 766-2920  
dryder@techpats.com